

INTRODUCTION

Just how easy is your website to use? You may think it's clear and simple, but imagine how you'd access the information on your site if you were partially sighted. Suddenly, what looks simple could be completely confusing.

Making sure your website is accessible to disabled people isn't just an altruistic thing to do – it's now a legal requirement for businesses on the web. Websites that offer services must make best efforts to ensure that internet users with impaired vision or other disabilities can use them as easily as the able-bodied.

There are other benefits. By making your site more accessible, you ensure it gets the maximum audience possible. With two million people in the UK alone having some form of visual impairment, you could easily miss out on potential customers by not having an accessible site.

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Website accessibility

If your site puts obstacles in the way of disabled users, you could fall foul of the law as well as lose potential customers. Ian Betteridge explains how to build a better website for all

Q We run a successful translation services business, but we feel that our website could be attracting more business. It's due a major redesign and we want to get everything right this time. We've heard that websites should be accessible to the disabled, but we're not really sure what this means or what we have to do about it. What are the legal requirements, how difficult are they to implement, and what is the likely impact on the cost of creating and maintaining our website?

We can't really afford to pay a disability specialist to redesign our site and we don't want to face expensive legal fines, either.

Fiona Woodcock



A The government brought in the Disability Discrimination Act (DDA) 1995 to try to end discrimination against the disabled in various areas of life, including employment, education and access to goods, facilities and services. In 1995 the hardly registered on the government's radar, but the parliament has since introduced additional codes of conduct under the act to specify that websites must be made accessible. Accessibility in this context means that disabled people must be able to access the services you offer on and through the site.

Does the DDA apply to you? If you offer any kind of service to the public, it definitely applies. The Code of Practice associated with the DDA gives the example of an airline company providing a reservation and booking service online, and specifically states that this must be equally accessible to everyone. The same applies if you sell goods online.

This means your website should cater for a variety of potential disabilities. You'll need to account for visual impairment and the possibility that someone may be using a screen reader, which converts the text onscreen to speech. You also need to make sure your site doesn't require precise positioning of the pointer onscreen so that those with motor difficulties such as Parkinson's Disease can use it. To make sure deaf people can use the site effectively, you need to ensure that nothing relies solely on audible clues. You should also avoid any kind of stroboscopic or flashing effects, so you don't trigger any epileptic seizures.

Fortunately, doing all this is neither costly nor likely to leave your website looking worse than it otherwise would. If anything, it's likely to ensure that the structure and organisation of your site is clearer to all your users, able-bodied and disabled alike.

DIFFERENT DISABILITIES

There are many different levels and types of disability that affect the ability to view and use websites, and catering for them all is probably impossible. However, there are four main groups you should aim to provide for. These are the blind, visually impaired users, people with motor disabilities and deaf people.

Blind users represent one of the largest challenges, for obvious reasons. Most blind internet users have some form of screen reader, which reads out the text on your site in a linear format, enabling them to navigate through pages and get all the information you

provide. It's vital that all the information on your site can be accessed in text form. Images are of no use to screen-reader users unless they have accompanying alt tags in the HTML, in which case the reader will describe them according to the text in the tag. What's more, you need to consider the page structure. Despite the name, screen readers don't read the screen as your eyes do. Instead, they look at a page's HTML code. If a piece of text is encoded as a header, the reader will announce it as a header. If you fail to declare a header as such, your visitor will be none the wiser.

This also means that screen-reader users have to listen to the page's content from top to bottom and left to right. If you have very important information on a page, it should be placed near the top of the page and not at the bottom, even if the visual layout displays this information prominently.

Partially sighted users will often use software screen magnifiers rather than screen readers. These vary, from the tools built into Windows and Mac PCs to third-party products such as Zoomtext (www.aisquared.com/Products). It's worth going through your site with a zoomed screen to see how well it performs. Can you navigate your way around using a magnifier? If not, partially sighted people will find your site hard to use.

If the company you're thinking of using to build or maintain your website tries to charge you more for making it accessible, look for another company. The principles of accessibility shouldn't cost you anything. As accessibility tends to mean your website eschews over-complex layouts, it could even cut costs a little.

ACCESSIBILITY DOS AND DON'TS

A large part of creating accessible sites hinges on following the World Wide Web Consortium (W3C) guidelines for correctly written code. Here are some simple tips to help you achieve this.

ALT WHO GOES THERE

When you design a page, make sure you set alt text tags for every image, including any that display text. Although a fully sighted person reading the page should be able to understand your message by looking at graphics, anyone who relies on screen-reading software will miss out without complete alt text tags.

This is probably the most common mistake designers make in terms of accessibility, and it's not just confined to amateur web developers. To check for alt

text tags, hover your cursor over graphics on a web page; text should pop up. Many commercial sites lack alternative text versions, and even Amazon.co.uk makes this simple mistake.

FLASH, FRAMES AND TABLES

Many designers seem to be obsessed with the pixel-perfect positioning of elements on a website, and they've used various tools to achieve this level of accuracy. Frames, tables and even Flash-only sites have all been used for this purpose, although none of these techniques and technologies was designed for this kind of use.

If you can avoid using these elements, you should; if you must use them, do so sparingly, as they all reduce accessibility to a greater or lesser degree. When using frames, ensure that there is also meaningful NOFRAMES content available for visitors who can't handle frames, perhaps because they are using limited browser software on mobile devices with small screens. NOFRAMES content appears when the browser can't display frames. Give each frame a sensible title, too.

Tables can also be confusing for screen-reading software when used for layout purposes. They are likely to include small blank spacer images, the titles of which the screen reader will (annoyingly) read out. A far better method is to control the layout using cascading style sheets (CSS); see our beginners' guide to HTML and CSS in *Shopper* January and February 2007 for details. Pages appear faster, and screen readers will be able to read them more accurately. If you're using tables as a means of presenting information, ensure you provide a summary element. Visual web browsers ignore these completely, but they're vital information for screen readers in particular.

Using CSS gives you a further advantage: it tends to work consistently on a wider range of browsers and platforms. A well-written site that uses CSS will 'degrade' gracefully if viewed on a text-only or low-bandwidth platform such as a mobile phone, which means you won't have to

create separate sites for those viewing on small screens. Of course, you may still want to make a separate mobile-only site so you can tailor the design and content to a small screen, but if a mobile user happens to view your main site it won't choke up their machine.

Using Flash in your website can present a problem. Flash 8 includes many accessibility features and Adobe has taken great pains to help designers create more accessible Flash-based content. See www.adobe.com/resources/accessibility/flash8 for an excellent set of guides. If you use Flash in your site, make sure you or your designer is familiar with these guidelines.

Even if you do decide to use Flash for some elements of your site, avoid creating the entire site with it. HTML is a far better tool to use if you want maximum accessibility.

LOOK AND FEEL

Make sure the navigational elements of your site, such as navigation toolbars and buttons, along with its basic layout, are consistent throughout. This is one of the most underestimated elements of a site's design. Keeping it consistent will make your site more accessible and better looking. Users can be sure where the elements are on your site once they have familiarised themselves with them, which aids both the partially sighted and those with learning difficulties.

Colour, font usage and contrast are also important. Fonts, for example, should not be too small. Of course, a font size that's legible for one partially sighted person may be too small for another. The answer is to let the user decide. All browsers have the option to increase or decrease the standard font size, and you should design the site so that someone who increases the font size doesn't end up looking at a mess. Test your design using different browsers, on different platforms and with different standard font settings to see how it looks.

There is no single best colour to use for fonts or backgrounds. Some users prefer black on

white, while others find white on black more comfortable. High-contrast colour palettes work best and accommodate the widest range of sight problems. One way to test colour-accessibility is to print all pages out in black and white to see how easy they are to read. To get an idea of what your site might look like to someone with a range of colour blindness issues, you can use Vischeck (www.vischeck.com/index.php). This online tool is also available as a Photoshop plug-in. You should design your site so that changing the text or background colour doesn't make it unusable.

You should also avoid indicating elements on the page according to their colour. For example, don't use phrases such as 'click on the blue bar'. Don't rely solely on colour to indicate when something is a link, either, as someone with colour blindness may not be able to distinguish it. Use underlines as well as colours. At the very least, allow an underline to appear when you hover the cursor over a link.

THE VERDICT

Designing for accessibility is an ongoing process. Each new browser release brings new accessibility features and more options for disabled users, but it also brings new features that may or may not make your site less accessible. This means that creating an accessible site isn't a one-off job. It's something that you should design for from the start and keep under review constantly.

If you do this, then you will end up with a website that everybody can access, and it will also be cleaner, simpler to use and far more likely to work on a variety of platforms and web browsers. **CS**

Next month

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Better by design Sites that get it right

One example of good, accessible design is Nature.com, the website of the long-established science journal. Nature.com has a clean, simple design that uses CSS to ensure that it works on just about any browser. The links on the front page are in blue but have underlines that appear when you hover over them, ensuring that those with colour blindness will be able to recognise a link.



▲ People with colour blindness can easily recognise the links at Nature.com

For an example of the effective use of alt tags on images, visit the Nationwide Building Society's website (www.nationwide.co.uk). Although the site uses many images with text on them, which you should usually avoid, all the text within each image is repeated in its alt tag, so someone using a screen reader will be able to get this information. Even buttons such as Apply Now have effective alt tags.



▲ The Nationwide Building Society's website uses alt tags in its images